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EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/914,953

Applicant(s)

Juuti et al.

Examiner

Rafael Perez-Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 2, 2005 has been entered. **Claims 1-20** are still pending in the present application.

### ***Substitute Specification***

2. The disclosure is objected to because of the following informalities:
- a) On **page 1 line 2**, replace "land designed" with --and designated-- after "2000";
  - b) On **page 1 line 20** and **page 5 line 1**, replace "e.g." with --e.g.,--;
  - c) On **page 1 line 29**, **page 5 line 17**, and **page 8 line 23**, replace "e.g." with --, e.g.,--;
  - d) On **page 3 line 2**, replace "characterising" with --characterizing--;
  - e) On **page 3 lines 6 and 7**, **page 8 line 32**, and **page 10 line 28**, replace "i.e." with --i.e.,--;
  - f) On **page 4 lines 28, 30, and 32**, replace "Centre", "centre", and "centres" with --Center--, --center--, and --centers--, respectively; and
  - g) On **page 5 lines 6, 8, 9, and 13**, replace "centre" with --center--.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-9 and 12-18** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Consider **claims 1, 12, and 16**, the limitation of “irrespective of whether or not the subscriber has a list of special cells” in **line 8 of claim 1, lines 12 and 13 of claim 12, and lines 8 and 9 of claim 16**, introduce new matter because the specification of the present application fails to disclose, suggest, or otherwise support said limitation.

Since the written description of the present application does not set forth that the checking step is performed irrespective of whether or not the subscriber has a list of special cells, the new limitation added to claims 1, 12, and 16 introduces new matter. Applicant is welcomed to point out where in the specification the Examiner can find support for this limitation if Applicant believes otherwise.

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***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 1-7, 12, 14, and 16-18** are rejected under 35 U.S.C. 102(a) as being anticipated by **Salmela et al. (WO 98/30056)**.

Consider **claim 1**, Salmela et al. clearly show and disclose a method for restricting connection of a mobile station MS to a cell (deciding whether a mobile station used by a subscriber is allowed to camp in a cell) of a mobile communication network (system) comprising location areas (LAs) defined to be network-specific (abstract, figure 1, page 1 lines 4-6, page 4 lines 9-12, and page 14 lines 22-25), the method comprising the steps of:

defining some of the location areas (LAs) to be network-specific localized (exclusive) service areas (LSAs) LSA1-LSA3 comprising special (exclusive) cells (C1-C3, C5, C11) (figure 1, page 4 lines 1-12, page 5 lines 14-18, and page 7 lines 26-28);

receiving, via a cell, a request for location update which initiates a location update procedure for updating the subscriber's location to a new location area (i.e., location area identifier/index (LAI)) (figures 2-5 message 21, page 2 lines 9-17, page 2 line 35 - page 3 line 2, page 4 lines 23 and 24, page 4 line 31 - page 5 line 9, page 8 lines 13-16, page 9 lines 19-23, page 10 lines 25-29, page 11 lines 19-23, and page 14 lines 21-25);

checking, irrespective of whether or not the subscriber has a list of special cells, during the location update procedure whether the new location area (i.e., location area identifier/index

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(LAI)) is a localized (exclusive) service area (LSA) LSA1-LSA3 (page 5 lines 6-9, page 6 lines 12-19, page 8 lines 17-25, page 11 lines 23-26, page 12 lines 10-19, page 14 lines 26-31, and page 15 lines 14-24); and

if the new location area (i.e., location area index (LAI)) is a localized (exclusive) service area (LSA) LSA1-LSA3 (page 12 line 28 - page 13 line 5, page 14 lines 28-31, and page 15 lines 14-24):

determining whether or not the subscriber is allowed to connect (camp) in the cell (page 14 lines 14-18, page 14 line 28 - page 15 line 3, and page 15 lines 14-24);

allowing the mobile station to connect (camp) in the cell by accepting the location update if the subscriber is allowed to connect (camp) in the cell (page 13 lines 1-5, page 14 lines 14-18, page 14 line 35 - page 15 line 1, and page 15 lines 14-24); and

restricting (preventing) the mobile station from connecting (camping) in the cell by rejecting the location update if the subscriber is not allowed to connect (camp) in the cell (page 13 lines 1-5, page 14 lines 14-18 and 21-35, and page 15 lines 1-34).

Consider **claim 2**, and as applied to **claim 1 above**, Salmela et al. further disclose maintaining information about localized (exclusive) service areas (LSAs) LSA1-LSA3 in a database (network element) of an intelligent network configured to reject or accept location updates (page 4 lines 18-22, page 5 lines 19-27, page 14 line 26 - page 15 line 4 and page 15 line 34 - page 16 line 1).

Consider **claim 3**, and as applied to **claim 2 above**, Salmela et al. also disclose:

maintaining information about localized (exclusive) service areas (LSAs) LSA1-LSA3

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comprising special (exclusive) cells (C1-C3, C5, C11) (figure 1) by maintaining information indicating whether the cell (C1-C3, C5, C11) is a special (exclusive) cell (page 4 lines 18-22, page 5 lines 19-27, page 8 lines 14-30, page 11 lines 20-35, page 12 line 20 - page 13 line 5, page 13 lines 18-26, page 14 lines 28-35, and page 15 lines 26-33); and

using cell information to decide whether the location area is a localized (exclusive) service area (LSAs) LSA1-LSA3 (page 8 lines 14-30, page 11 lines 20-35, page 12 line 20 - page 13 line 5, page 13 lines 18-26, page 14 lines 28-35, and page 15 lines 26-33).

Consider **claim 4**, and **as applied to claim 1 above**, Salmela et al. further disclose:

receiving an indication (e.g., message 32 transmitted from the intelligent network to the visitor location register (VLR)) indicating whether the cell is a special (exclusive) cell during location update (figures 3A, 3B, and 4B, page 8 lines 20-30, page 9 lines 26-30, page 11 lines 11-18, and page 11 lines 23-35); and

deciding on the basis of the indication (e.g., by looking at optional field 11 included in the list of special (exclusive) cells 10) whether the location area of the cell is a localized (exclusive) service area (LSAs) LSA1-LSA3 (figures 1 and 5, page 5 lines 19-27, page 12 line 20 - page 13 line 5, and page 14 line 22 - page 15 line 33).

Consider **claim 5**, and **as applied to claim 1 above**, Salmela et al. also disclose wherein the mobile communication network (system) comprises localized (exclusive) service areas (LSAs) LSA1-LSA3 (figure 1, page 4 lines 1-12, and page 7 lines 26-28);

the special (exclusive) cells (C1-C3, C5, C11) are special (exclusive) access cells (i.e., only certain subscribers can connect to those cells) (page 4 lines 1-15, page 5 lines 18-27, page 8

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lines 6-9, and page 14 line 14 - page 15 line 33); and

the fact whether or not the subscriber is allowed to connect (camp) in the cell is determined by comparing the localized (exclusive) service area (LSA) LSA1-LSA3 information to the subscriber's localized (exclusive) service area (LSAs) LSA1-LSA3 (page 4 lines 1-22, page 5 lines 14-27, and page 14 line 21 - page 15 line 33).

Consider **claim 6**, and **as applied to claim 1 above**, Salmela et al. further disclose wherein

the mobile communication network (system) comprises localized (exclusive) service areas (LSAs) LSA1-LSA3 (figure 1, page 4 lines 1-12, and page 7 lines 26-28);

the special (exclusive) cells (C1-C3, C5, C11) are special (exclusive) access cells (i.e., only certain subscribers can connect (have access) to those cells) (page 4 lines 1-15, page 5 lines 18-27, page 8 lines 6-9, and page 14 line 14 - page 15 line 33); and

the fact whether or not the subscriber is allowed to connect (camp) in the cell is determined by comparing the localized (exclusive) service area (LSA) LSA1-LSA3 information to the subscriber's localized (exclusive) service area (LSAs) LSA1-LSA3 (page 4 lines 1-22, page 5 lines 14-27, and page 14 line 21 - page 15 line 33); and

the method further comprising:

defining localized (exclusive) service areas (LSAs) LSA1-LSA3 (figure 1) so that when an special (exclusive) access cell (e.g., C1) belongs to a localized (exclusive) service area (LSA) LSA1, the other cells (e.g., C2 and C3) in that localized (exclusive) service area (LSA) LSA1 are also special (exclusive) cells (figure 1, page 4 lines 1-22, page 5 lines 14-27, page 8 lines 25-30,



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page 12 line 20 - page 13 line 5, and page 14 line 26 - page 15 line 3);

maintaining information about localized (exclusive) service areas (LSAs) LSA1-LSA3 comprising special (exclusive) cells (C1-C3, C5, C11) (figure 1, page 4 lines 18-22, page 5 lines 19-27, page 8 lines 14-30, page 11 lines 20-35, page 12 line 20 - page 13 line 5, page 13 lines 18-26, page 14 lines 28-35, and page 15 lines 26-33); and

using that information to decide whether the location area is a localized (exclusive) service area (LSAs) LSA1-LSA3 (page 5 lines 19-27, page 8 lines 14-30, page 11 lines 20-35, page 12 line 20 - page 13 line 5, page 13 lines 18-26, and page 14 line 22 - page 15 line 33).

Consider **claim 7**, and **as applied to claim 5 above**, Salmela et al. also disclose receiving the cell identifier (CI) (location area identity of the cell), the location area identifier/index (LAI) (local service area information of the cell), and the international mobile subscriber identity (IMSI) (subscriber's identification information) during the location update (page 8 lines 17-30 and page 12 line 28 - page 13 line 5).

Consider **claim 12**, Salmela et al. clearly show and disclose a mobile communication network (system) comprising:

special (exclusive) cells (C1-C3, C5, C11) and other cells via which a mobile station may be connected to the network (figure 1, page 4 lines 1-12, page 5 lines 14-18, and page 7 lines 26-28);

network-specific localized (exclusive) service areas (LSAs) LSA1-LSA3 defining groups of cells (figure 1, page 4 lines 1-12, page 5 lines 14-18, and page 7 lines 26-28); and

at least one mobile station which is arranged to, in response to a new location area (i.e.,

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location area identifier/index (LAI)), to send a location update request including the identity of the new location area (LAI) and the international mobile subscriber identity (IMSI) (information about the subscriber using it) (figures 2-5 message 21, page 2 lines 9-17, page 2 line 35 - page 3 line 2, page 4 lines 23 and 24, page 4 line 31 - page 5 line 9, page 8 lines 13-30, page 9 lines 19-23, page 10 lines 25-29, page 11 lines 19-23, page 12 line 28 - page 13 line 5, and page 14 lines 21-25);

wherein

at least one of the localized (exclusive) service areas (LSAs) LSA1-LSA3 is defined to be a network-specific localized (exclusive) service area (LSA) LSA1-LSA3 comprising at least one special (exclusive) cell (C1-C3, C5, C11) (i.e., only certain subscribers can connect (have access) to those cells) (figure 1, page 4 lines 1-15, page 5 lines 14-27, page 7 lines 26-28, page 8 lines 6-9, and page 14 line 14 - page 15 line 33); and

the network is arranged to access information about localized (exclusive) service areas (LSAs) LSA1-LSA3 and, in response to a location update request of a mobile station, to check, irrespective of whether or not the subscriber has a list of special cells, whether the location area (i.e., location area identifier/index (LAI)) in the location update is a localized (exclusive) service area (LSA) LSA1-LSA3 (page 5 lines 6-9, page 6 lines 12-19, page 8 lines 17-25, page 11 lines 23-26, page 12 lines 10-19, page 14 lines 26-31, and page 15 lines 14-24) and if it is (page 12 line 28 - page 13 line 5, page 14 lines 28-31, and page 15 lines 14-24) to check whether the subscriber is allowed to connect (camp) in the cell (page 14 lines 14-18, page 14 line 28 - page 15 line 3, and page 15 lines 14-24), and to reject the location update if the subscriber is not

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allowed to connect (camp) in the cell (page 13 lines 1-5, page 14 lines 14-18 and 21-35, and page 15 lines 1-34).

Consider **claim 14**, and **as applied to claim 12 above**, Salmela et al. further disclose that the network (system) comprises localized (exclusive) service areas (LSAs) LSA1-LSA3 defining local services for subscriber's via cells or a cell defined as belonging to a localized (exclusive) service area (LSA) LSA1-LSA3 (figure 1, page 4 lines 1-12, and page 7 lines 26-28), and the network is further arranged to received information (e.g., location area identifier/index (LAI)) on the local service area of the cell and to check whether the subscriber is allowed to connect (camp) in the cell by comparing the localized (exclusive) service area (LSA) LSA1-LSA3 information to the subscriber's localized (exclusive) service area (LSAs) LSA1-LSA3 (page 4 lines 1-22, page 5 lines 14-27, and page 14 line 21 - page 15 line 33).

Consider **claim 16**, Salmela et al. clearly shows and discloses a database (network element) in a mobile communications network (system) taking part in location update procedures between the system and a mobile station (figure 1 and page 4 lines 18-22), which network (system) comprises localized (exclusive) service area (LSA) LSA1-LSA3 defined to be network-specific (figure 1),

wherein

the database (network element) is arranged to store or to have access to information about network-specific localized (exclusive) service areas (LSAs) LSA1-LSA3 comprising one or more special (exclusive) access cells (C1-C3, C5, C11) (i.e., only certain subscribers can connect (have access) to those cells) (page 1 lines 4-6, page 4 lines 1-22, page 5 lines 14-27, page 7 lines

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26-28, page 8 lines 6-9, and page 14 line 14 - page 15 line 33) and, in response to a location update to a cell, to check, irrespective of whether or not the subscriber has a list of special cells, whether the location area to which the location update is targeted is an localized (exclusive) service area (LSA) LSA1-LSA3 (page 5 lines 6-9, page 6 lines 12-19, page 8 lines 17-25, page 11 lines 23-26, page 12 lines 10-19, page 14 lines 26-31, and page 15 lines 14-24) and if it is, to check whether or the subscriber is allowed to connect (camp) in the cell (page 12 line 28 - page 13 line 5, page 14 lines 14-18, page 14 line 28 - page 15 line 3, and page 15 lines 14-24), and to reject the location update if the subscriber is not allowed to connect (camp) in the cell (page 13 lines 1-5, page 14 lines 14-18 and 21-35, and page 15 lines 1-34).

Consider **claim 17**, and **as applied to claim 16 above**, Salmela et al. further disclose that the network (system) further comprises localized (exclusive) service areas (LSAs) LSA1-LSA3 defining local services for subscribers via cells or a cell defined as belonging to a localized (exclusive) service area (LSA) LSA1-LSA3 (figure 1, page 4 lines 1-12, and page 7 lines 26-28), and the database (network element) is further arranged to received information (e.g., location area identifier/index (LAI)) on the local service area of the cell and to check whether the subscriber is allowed to connect (camp) in the cell by comparing the localized (exclusive) service area (LSA) LSA1-LSA3 information to the subscriber's localized (exclusive) service area (LSAs) LSA1-LSA3 (page 4 lines 1-22, page 5 lines 14-27, and page 14 line 21 - page 15 line 33).

Consider **claim 18**, and **as applied to claim 17 above**, Salmela et al. further disclose that the information about localized (exclusive) service areas (LSAs) LSA1-LSA3 comprises

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localized (exclusive) service areas (LSAs) LSA1-LSA3 having at least one cell in the area of the database (network element) (e.g., location areas in the vicinity of the HLR or VLR) (page 5 lines 19-27 and page 15 lines 14-25).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 8, 10, 11, 13, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Salmela et al. (WO 98/30056)** in view of **Nordstrand (U.S. Patent # 6,334,052 B1)**, and further in view of **Seppanen et al. (U.S. Patent # 5,903,832)**.

Consider **claim 8**, Salmela et al. clearly show and disclose the claimed invention as **applied to claim 5 above**, and, in addition, Salmela et al. further disclose:

broadcasting the cell identifier (CI) (location area identity of the cell) and the location area identifier/index (LAI) (local service area information) of the cell (page 2 lines 6-11, page 4 line 26-28, and page 13 line 31 - page 14 line 5);

broadcasting an indication (e.g., a message) indicating that cell is a special (exclusive) access cell on a broadcast channel (BCCH) when the cell is an special (exclusive) access cell (page 1 lines 14-18, page 4 lines 26-30, page 6 lines 7-20, page 12 line 29 - page 13 line 5, and page 13 line 33 - page 14 line 5); and

when receiving the new cell identifier (CI) (location area identity) and said indication (e.g., a message) in the broadcast in the mobile station, comparing the location area identifier/index (LAI) (local service area information) of the cell with the subscriber's local service area information stored in the mobile station (page 1 lines 14-18, page 2 lines 6-11, page 4 lines 24-30, page 5 lines 10-18, page 6 lines 7-12, and page 13 line 33 - page 14 line 5).

However, Salmela et al. do not specifically disclose that

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if there is a match, camping in the cell by sending a location update request, or  
if there is no match, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state.

In the same field of endeavor, Nordstrand clearly discloses a method for deciding whether a mobile station is allowed to camp in a cell (idle mode cell selection) comprising, among other steps, the steps of:

comparing received cell-related information (local service area information of the cell) with a subscriber's predefined areas (local service area information) stored in the mobile station (abstract, column 4 lines 6-9 and 32-50, and column 6 lines 1-20 and 28-45); and

if there is a match, camping in the cell by sending a location update request (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17); or

if there is no match, trying to find a suitable cell where to camp in (figure 4 and column 10 line 41 - column 11 line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the technique for allowing camping in a cell taught by Nordstrand into the method taught by Salmela et al. in order to save radio and network resources (Nordstrand; column 7 lines 22-29 and column 8 lines 10-17).

However, Salmela et al., as modified by Nordstrand, do not specifically disclose that if a suitable cell is not found, entering a limited service state.

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In the same field of endeavor, Seppanen et al. clearly disclose a method in which a mobile terminal (station) having enhanced system selection capability enters a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the step of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the method of Salmela et al., as modified by Nordstrand, in order to save battery power and/or processing resources.

Consider **claim 10**, Salmela et al. clearly show and disclose a method for restricting connection of a mobile station MS used by a subscriber (deciding whether to trigger a location update) (abstract, figure 1, page 1 lines 4-6, page 4 lines 9-12, and page 14 lines 22-25), the method comprising:

defining network-specific localized (exclusive) service areas (LSAs) LSA1-LSA3 (figure 1) so that all special (exclusive) cells (e.g., C1-C3) are in network-specific localized (exclusive) service area (LSA) comprising special (exclusive) cells (e.g., C1-C3) (figure 1, page 4 lines 1-22, page 5 lines 14-27, page 8 lines 25-30, page 12 line 20 - page 13 line 5, and page 14 line 26 - page 15 line 3);

broadcasting a cell identifier (CI) (location area identity of the cell) and location area identifier/index (LAI) (local service area information) (page 2 lines 6-11, page 4 line 26-28, and page 13 line 31 - page 14 line 5);

broadcasting an indication (e.g., a message) indicating that cell is a special (exclusive) cell when the cell belongs to a localized (exclusive) service area (LSA) comprising special



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(exclusive) cells (e.g., C1-C3) (page 1 lines 14-18, page 4 lines 26-30, page 6 lines 7-20, page 12 line 29 - page 13 line 5, and page 13 line 33 - page 14 line 5).

However, Salmela et al. do not specifically disclose the steps of:

determining, in the mobile station, whether the mobile station is allowed to camp in the cell in response to receiving a new cell identifier (CI) (location area identity) and said indication (e.g., a message) indicating an special (exclusive) cell in the broadcast; and

if camping is allowed, sending a location update request, or

if camping is not allowed, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state in the mobile station.

In the same field of endeavor, Nordstrand clearly discloses a method for deciding whether a mobile station is allowed to camp in a cell (trigger a location update) comprising, among other steps, the steps of:

determining, in the mobile station, whether a mobile station is allowed to camp in a cell in response to receiving cell-related information (location area identity) and an indication (e.g., a message) indicating an exclusive cell in the broadcast (abstract, figures 4 and 5, column 4 lines 6-12 and 32-50, column 5 lines 1-20 and 47-59, and column 6 lines 1-20 and 28-45); and

if camping is allowed, sending a location update request (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17); or

if camping is not allowed, trying to find a suitable cell in which to camp (figure 4 and

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column 10 line 41 - column 11 line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the technique for allowing camping in a cell taught by Nordstrand into the method taught by Salmela et al. in order to save radio and network resources (Nordstrand; column 7 lines 22-29 and column 8 lines 10-17).

However, Salmela et al., as modified by Nordstrand, do not specifically disclose that if a suitable cell is not found, entering a limited service state in the mobile station.

In the same field of endeavor, Seppanen et al. clearly disclose a method in which a mobile terminal (station) having enhanced system selection capability enters a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the step of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the method of Salmela et al., as modified by Nordstrand, in order to save battery power and/or processing resources.

Consider **claim 11**, Salmela et al., as modified by Nordstrand, clearly show and disclose the claimed invention **as applied to claim 10 above**, and, in addition, Salmela et al. further disclose that:

the mobile communication network (system) comprises localized (exclusive) service areas (LSAs) LSA1-LSA3 (figure 1, page 4 lines 1-12, and page 7 lines 26-28);

the special (exclusive) cells (C1-C3, C5, C11) are special (exclusive) access cells (i.e., only certain subscribers can connect (have access) to those cells) (page 4 lines 1-15, page 5 lines

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18-27, page 8 lines 6-9, and page 14 line 14 - page 15 line 33); and

the method further comprises:

broadcasting a location area identifier/index (LAI) (local service area information) of the cell (page 2 lines 6-11, page 4 line 26-28, and page 13 line 31 - page 14 line 5);

comparing the broadcast location area identifier/index (LAI) (local service area information) of the cell with the subscriber's local service area information stored in the mobile station in response to receiving a new cell identifier (CI) (location area identity) and said indication (e.g., a message) indicating a special (exclusive) access cell in the broadcast (page 1 lines 14-18, page 2 lines 6-11, page 4 lines 24-30, page 5 lines 10-18, page 6 lines 7-12, and page 13 line 33 - page 14 line 5).

However, Salmela et al. do not specifically disclose that

if there is a match, sending a location update request, or

if there is no match, trying to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state.

In the same field of endeavor, Nordstrand clearly discloses a method for deciding whether a mobile station is allowed to camp in a cell (trigger a location update) comprising, among other steps, the steps of:

comparing received cell-related information (broadcast local service area information of the cell) with a subscriber's predefined areas (local service area information) stored in the mobile station in response to receiving cell-related information (location area identity) and an indication (e.g., a message) indicating an exclusive access cell in the broadcast (abstract, figures 4 and 5,

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column 4 lines 6-12 and 32-50, column 5 lines 1-20 and 47-59, and column 6 lines 1-20 and 28-45); and

if there is a match, sending a location update request (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17); or

if there is no match, trying to find a suitable cell in which to camp (figure 4 and column 10 line 41 - column 11 line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the technique for allowing camping in a cell taught by Nordstrand into the method taught by Salmela et al. in order to save radio and network resources (Nordstrand; column 7 lines 22-29 and column 8 lines 10-17).

However, Salmela et al., as modified by Nordstrand, do not specifically disclose that if a suitable cell is not found, entering a limited service state.

In the same field of endeavor, Seppanen et al. clearly disclose a method in which a mobile terminal (station) having enhanced system selection capability enters a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the step of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the method of Salmela et al., as modified by Nordstrand, in order to save battery power and/or processing resources.

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Consider **claim 13**, Salmela et al. clearly show and disclose the claimed invention as **applied to claim 12 above**, and, in addition, Salmela et al. further disclose that:

the network is arranged to broadcast a cell identifier (CI) (location area identity of the cell) and an indication (e.g., a message) that cell is a special (exclusive) cell when the cell belongs to a localized (exclusive) service area (LSA) (page 1 lines 14-18, page 2 lines 6-11, page 4 lines 26-30, page 6 lines 7-20, page 12 line 29 - page 13 line 5, and page 13 line 31 - page 14 line 5).

However, Salmela et al. do not specifically disclose that:

the mobile station is arranged, in response to receiving a new cell identifier (CI) (location area identity) and said indication (e.g., a message), to determine whether the mobile station is allowed to camp, and if it is allowed, to send a location update request to the network, or if it is not allowed, to try to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state.

In the same field of endeavor, Nordstrand clearly discloses a mobile communications network comprising:

a mobile station, said mobile station is arranged, in response to receiving cell-related information (location area identity) and an indication (e.g., a message) indicating an exclusive cell, to determine whether the mobile station is allowed to camp in the cell (abstract, figures 4 and 5, column 4 lines 6-12 and 32-50, column 5 lines 1-20 and 47-59, and column 6 lines 1-20 and 28-45); and if it is allowed, to send a location update request to the network (the location update request is not explicitly mentioned but it is inherent from the conventional techniques

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mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17); or if it is not allowed, to try to find a suitable cell in which to camp (figure 4 and column 10 line 41 - column 11 line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the technique, in a mobile station, for allowing camping in a cell taught by Nordstrand into the network taught by Salmela et al. in order to save radio and network resources (Nordstrand; column 7 lines 22-29 and column 8 lines 10-17).

However, Salmela et al., as modified by Nordstrand, do not specifically disclose that if a suitable cell is not found, to enter a limited service state.

In the same field of endeavor, Seppanen et al. clearly disclose a system in which a mobile terminal (station) having enhanced system selection capability enters a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the step of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the network of Salmela et al., as modified by Nordstrand, in order to save battery power and/or processing resources.

Consider **claim 15**, Salmela et al. clearly show and disclose the claimed invention as **applied to claim 14 above**, and, in addition, Salmela et al. further disclose that:

the network is arranged to broadcast the cell identifier (CI) (location area identity of the cell), the location area identifier/index (LAI) (local service area information) of the cell (page 2 lines 6-11, page 4 line 26-28, and page 13 line 31 - page 14 line 5), and an indication (e.g., a

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message) indicating that cell is a special (exclusive) access cell on when the cell is an special (exclusive) access cell (page 1 lines 14-18, page 4 lines 26-30, page 6 lines 7-20, page 12 line 29 - page 13 line 5, and page 13 line 33 - page 14 line 5); and

the mobile station is arranged, in response to receiving the new cell identifier (CI) (location area identity) and said indication (e.g., a message), to compare the location area identifier/index (LAI) (broadcast local service area information) of the cell with the subscriber's local service area information stored in the mobile station (page 1 lines 14-18, page 2 lines 6-11, page 4 lines 24-30, page 5 lines 10-18, page 6 lines 7-12, and page 13 line 33 - page 14 line 5).

However, Salmela et al. do not specifically disclose that

if there is a match, to send a location update request to the network, or

if there is no match, to try to find a suitable cell in which to camp and if a suitable cell is not found, entering a limited service state.

In the same field of endeavor, Nordstrand clearly discloses a mobile communications network comprising:

a mobile station arranged, to compare received cell-related information (local service area information of the cell) with a subscriber's predefined areas (local service area information) stored in the mobile station (abstract, column 4 lines 6-9 and 32-50, and column 6 lines 1-20 and 28-45), and if there is a match, to send a location update request to the network (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17); or

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if there is no match, to try to find a suitable cell in which to camp (figure 4 and column 10 line 41 - column 11 line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the technique for allowing camping in a cell taught by Nordstrand into the network taught by Salmela et al. in order to save radio and network resources (Nordstrand; column 7 lines 22-29 and column 8 lines 10-17).

However, Salmela et al., as modified by Nordstrand, do not specifically disclose that if a suitable cell is not found, to enter a limited service state.

In the same field of endeavor, Seppanen et al. clearly disclose a system in which a mobile terminal (station) having enhanced system selection capability enters a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the step of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the network of Salmela et al., as modified by Nordstrand, in order to save battery power and/or processing resources.

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Salmela et al. (WO 98/30056)** in view of **well known prior art (MPEP 2144.03)**.

Consider **claim 9**, and **as applied to claim 1 above**, Salmela et al. clearly shows and discloses the claimed invention except rejecting the location update with the cause "roaming not allowed in this location area".



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Nonetheless, the Examiner takes Official Notice that it is notoriously well known in the art to reject a location update with the cause of “roaming not allowed” for purposes of, for example, identifying the reason for the rejection in the system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to reject the location update with the cause of “roaming not allowed in this location area”, as well known in the art, in the method of Salmela et al. in order to, for example, identifying the reason for the rejection in the system.

8. **Claims 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nordstrand (U.S. Patent # 6,334,052 B1)** in view of **Seppanen et al. (U.S. Patent # 5,903,832)**.

Consider **claim 19**, Nordstrand clearly shows and discloses a mobile station which supports cell services definitions (e.g., areas with different tariff classes) in a mobile communications system comprising location areas (figure 1) defined to be network-specific, the mobile station arranged to receive broadcast information about a location area of the cell (i.e., cell-related information) (abstract, figures 1 and 2, column 4 lines 6-9, 18-21, 43-54, and column 5 lines 6-16 and 27-46), and

to determine whether or not the subscriber is allowed to camp in the cell in response to receiving in the broadcast a new location area (i.e., new cell identifier) and an indication indicating that the cell belongs to a network-specific location area comprising exclusive cells (abstract, column 4 line 39 - column 5 line 20, column 5 lines 27-59, and column 10 lines 4-18),

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and if the mobile station is allowed to camp in the cell, to send a location update request to the system (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17), or if the mobile station is not allowed, to try to find a suitable cell in which to camp (figure 4 and column 10 line 41 - column 11 line 6).

However Nordstrand does not specifically disclose that if a suitable cell is not found, to enter a limited service state.

In the same field of endeavor, Seppanen et al. clearly disclose a mobile terminal (station) having enhanced system selection capability, said mobile terminal (station) entering a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the feature of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the mobile station of Nordstrand in order to save battery power and/or processing resources.

Consider **claim 20**, Nordstrand, as modified above, clearly discloses the claimed invention **as applied to claim 19 above**, and, in addition, Nordstrand further discloses wherein the mobile communications system further comprises local services areas supporting local service areas definitions (e.g., different tariff classes depending on the area (column 4 lines 18-21) or microcells 101-103 serving employees of a particular company (figure 1 and column 8 lines 36-39)), wherein

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the cell service definitions supported by the mobile station comprises local service areas definitions (e.g., areas with different tariff classes) (abstract, column 4 lines 6-14, 18-21, and 61-67, column 5 lines 47-59, and column 7 lines 30-37); and

the mobile station is arranged to receive broadcast information about local service areas of a cell (i.e., cell-related information) (abstract, column 4 lines 43-67, and column 5 lines 34-59) and to perform the determining by comparing the local service area information for the cell (i.e., cell-related information) with subscriber's local service area information in response in response to receiving in the broadcast a new location area (i.e., new cell identifier) and an indication indicating that the cell belongs to a location area consisting of exclusive access cells (abstract, column 4 line 39 - column 5 line 20, column 5 lines 27-59, and column 10 lines 4-18), and if it there is a match, to send a location update request to the system (the location update request is not explicitly mentioned but it is inherent from the conventional techniques mentioned on column 11 lines 4-6; also see abstract, column 4 lines 39-50, column 5 lines 1-20 and 28-59, column 7 lines 14-29 and 43-49, and column 8 lines 9-17), or if there is no match, to try to find a suitable cell in which to camp (figure 4 and column 10 line 41 - column 11 line 6).

However Nordstrand does not specifically disclose that if a suitable cell is not found, to enter a limited service state.

In the same field of endeavor, Seppanen et al. clearly disclose a mobile terminal (station) having enhanced system selection capability, said mobile terminal (station) entering a limited service state if a suitable system cell for communications is not found (column 10 lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

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the invention was made to further incorporate the feature of entering a limited service state if a suitable cell is not found, as taught by Seppanen et al., into the mobile station of Nordstrand in order to save battery power and/or processing resources.

### ***Response to Arguments***

9. Applicant's arguments filed July 29, 2004 have been fully considered but they are not persuasive.

Regarding **claims 1, 12, 16, and 19**, Applicant argues, on page 10 of the remarks, that Salmela teaches that localized service areas are defined to be subscriber-specific or subscriber group-specific and, therefore, Salmela fails to teach that the location areas are network-specific.

The Examiner respectfully disagrees with Applicant's argument because Salmela clearly shows and discloses that the location areas are network-specific (i.e., LSA1 comprising cells C1-C3) and not subscriber-specific (see figure 1). Moreover, the current claim language does not set forth any differentiation between the local service areas of Salmela and the location areas claimed by the Applicant. In fact, cells C1-C3 in Salmela are network-specific cells in which special services are provided to a subscriber or to a subscriber group (see page 1 lines 4-6, page 4 lines 1-12, page 5 lines 14-18, page 7 lines 26-28, and page 14 lines 22-25). If Applicant believes that the claimed locations areas are different from the location areas taught by Salmela, such difference must be set forth in the claim. Limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Therefore, in view of the above reasons and having addressed Applicant's argument, the previous rejection is maintained by the Examiner.

***Conclusion***

10. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (571) 272-7915. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

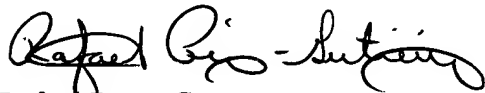
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.



Rafael Perez-Gutierrez  
R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

August 17, 2005